REMARKS

Status of Claims

Claims 1-11 are pending in the present application. In the outstanding Office Action, claims 1-11 have been rejected under 35 U.S.C. § 112, second paragraph. Also, claims 1-11 have been rejected on the grounds of prior art.

In the Amendment submitted herein, the specification and the claims 1 and 4-7 have been amended. Support for the amendments is found in the originally filed claims and specification. No new matter has been introduced.

Objection to the Specification

Applicants now respond in turn to the Examiner's concerns expressed in paragraphs 1-4 of the Office Action relating to the specification.

Office Action Paragraph 1.

- 1.1 In order to address the Examiner's concerns, the specification has been amended at page 11 to capitalize the trademarks, specifically, "Turbomill" and "Cryptron".
- 1.2-1.5) The Examiner points out inconsistencies between Table 1 and Table 2. In order to address the Examiner's concerns, substitute Table 1 is submitted as attached hereto (ATTACHMENT 1A). This application includes a proper claim for priority under 35 U.S.C. §119 and the International Convention for the Protection of Industrial Property to Japanese Patent Application No. 1999-034907. During preparing an English translation for this

application, typographical errors were included in Table 1. Substitute Table 1 is based on the Japanese priority document, and is consistent with Table 2. In this regard, the corresponding portion of the Japanese priority document and English translation thereof are attached hereto (ATTACHMENT 2).

Office Action Paragraph 2

2. The specification has been objected to as failing to provide proper antecedent basis for the claimed subject matter of claim 7.

In response, claim 7 has been amended to correct the weight average molecular weight (Mw) of the resin as --2,000 to 1,000,000--, to be consistent with the specification.

Office Action Paragraphs 3-4

3-4. The Examiner points out the definition of the term "isolation ratio" as being unclear. In order to address the Examiner's concerns, the third paragraph at page 7 of the specification has been deleted in its entirety. Thus, the term "isolation ratio" is clearly defined as a ratio (% by number) of the number of synchronous light emission particles to the sum of the number of the synchronous and non-synchronous light emission particles, as described at page 8, lines 20-24 of the specification.

Rejection under 35 U.S.C. § 112, second paragraph

Claims 1-11 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In response, claims 1, 4 and 7 have been properly amended to overcome the rejection.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 1-11 under 35 U.S.C. § 112, second paragraph.

Prior Art Rejections

Claims 1-6, 8-10 and 11/6 have been rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103 as being obvious over Kobayashi (U.S. Patent Number 5,376,493), Ugai et al. (U.S. Patent Number 5, 856,055) or Sato et al. (U.S. Patent Number 5,645,967). The anticipation and obviousness rejections will now be responded to in turn.

Anticipation Rejection, 35 U.S.C. § 102(b)

Claims 1-6, 8-10 and 11/6 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Kobayashi (U.S. Patent Number 5,376,493), Ugai et al. (U.S. Patent Number 5,856,055) or Sato et al. (U.S. Patent Number 5,645,967).

The Examiner states in the Office Action that each of the Kobayashi, Ugai and Sato references disclose a toner including a binder resin, a colorant and at least one element in an amount as recited by Applicants in claim 1. Further, the Examiner states that although the references do not explicitly disclose the isolation ratio element of Applicant's claim 1, such element is presumably included within the references because of compositional similarities and because the references allegedly possess the properties sought by Applicants. Thus, the Examiner concludes that the references each anticipate Applicants' invention.

Applicant herein respectfully submits that the cited references do not explicitly, implicitly, or inherently disclose, or teach the claimed invention, thus, the present anticipation rejections may not be maintained.

In amended claim 1, Applicants recite a toner for developing an electrostatic image comprising a resin binder and a colorant. The toner is recited as containing an amount of not less than 0.1% by weight of an element selected from the group consisting of copper, chromium, iron, zinc and molybdenum, and having an isolation ratio of not more than 10% by number.

To anticipate a claim, it is known that a prior art reference must teach each and every element of the claimed invention. That is, there is an anticipation only if the disclosure in a single reference places a claimed invention in possession of the public. *In re Brown*, 329 F. 2d at 1011 (CCPA, 1964).

As admitted by the Examiner in the outstanding Office Action, none of the prior art references teach a toner including an element selected from copper, chromium, iron, zinc and molybdenum and an isolation ratio of the element not more than 10% by number.

Despite the absence of a teaching in any of the references of Applicants' isolation ration limitation, the Examiner alleges that it is reasonable to presume that the toner of each one of the prior art references includes such limitation since the toner disclosed in the references meets the compositional limitations of the instant claims and has the properties sought by applicants.

However, Applicants define the isolation ratio as a ratio (% by number) of the number of synchronous light emission particles to the sum of the number of the synchronous and non-synchronous light emission particles (page 8, lines 20-24 of the specification). Also, the synchronous light emission particle is defined as a particle

containing the specified element which synchronously emits light caused by the specified element with light caused by carbon atom, and the non-synchronous light emission particle is defined as a particle containing the specified element which emits light caused by the specified element without being synchronous with light emission caused by carbon atom (page 8, lines 12-20 of the specification).

Therefore, Applicants' isolation ratio is not automatically determined by the compositional limitation of each component nor its specific amount in the composition, but can be varied by several factors which are considered during the manufacturing process of the composition (page 11, lines 11-13, and page 19, lines 5-10 of the specification). That is, the references do not *necessarily* possess the isolation ratio characteristic of Applicant's invention.

Thus, it is not reasonable to presume that the cited references disclose Applicants' isolation ratio limitation simply because the references allegedly disclose toners including compositional limitations of the claimed invention and properties sought by Applicants.

Accordingly, the prior art references relied upon by the Examiner clearly fail to teach all of the limitations recited by Applicants. Specifically, the references fail to teach a toner composition having, among other elements, an isolation ratio of an element of not more than 10% by number. Therefore, the cited references fail to anticipate Applicants' invention and are, thus, not proper prior art under 35 U.S.C. 102. Applicants respectfully request reconsideration and withdrawal of the anticipation rejection of claim 1.

Claims 2-6 and 8 depend from claim 1 and are therefore not anticipated by the cited references for at least the reasons set forth herein above.

Claim 9 recites a developer comprising a toner of claim 1. Claim 10 recites a developer comprising a toner of claim 1 and a carrier. Therefore, by at least the same

reasoning set forth herein above with regard to claim 1, claims 9 and 10 are not anticipated by references relied upon by the Examiner.

Claim 11/6 recites an image forming method wherein the toner of claim 6 used. Claim 6 variably depends from claim 1 and further defines the isolation ratio of the element as being not more than 2.5% by number. Thus, for at least the reasons set forth herein above with reference to independent claim 1, claim 11 is not anticipated by the cited references relied upon by the Examiner.

For at least the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of the anticipation rejection of claims 1-6, 8-10 and 11/6.

Obviousness Rejection, 35 U.S.C. § 103(a)

Claims 1-6, 8-10 and 11/6 have been rejected under 35 U.S.C. § 103(a) as being obvious over Kobayashi (U.S. Patent Number 5,376,493), Ugai et al. (U.S. Patent Number 5, 856,055) or Sato et al. (U.S. Patent Number 5,645,967).

At least the isolation ratio limitation, as recited by Applicants in claim 1, is not explicitly, implicitly, or inherently taught by the cited references. Further, this limitation is not suggested by the cited references. Therefore, there exists no prima facie obviousness and, accordingly, the rejection may not be maintained.

As discussed above relative to the outstanding anticipation rejection, Applicants' isolation ratio is determined by several factors during the manufacturing process of the composition and is not simply and function of compositional constituents nor amounts thereof. That is, in possessing a similar composition having similar properties as Applicants' invention, as alleged by the Examiner, the cited references do not necessarily possess Applicants' recited isolation

ratio limitation.

In this regard, Applicants submit a declaration under 37 C.F.R. § 1.132, as attached hereto (ATTACHMENT 3). Pursuant to the method disclosed in each prior art reference, toner samples (Samples K (Kobayashi), Q and R (Ugai), and S (Sato)) were prepared, and evaluated according to analytical method described in the present invention. As shown in the table included in the declaration, Kogayashi's sample has the isolation ratio of 12.6. Two samples of Ugai have 18.3 and 13.7 of the isolation ratio. The isolation ratio of Sato's sample S is 14.2. None of the samples meet the isolation ratio limitation of not more than 10% as recited in Applicants' claim 1.

Further, further the references do not *suggest* Applicants' invention in that the references do not recognize that the isolation ratio defined as disclosed in the specification is one factor in determining quality and performance of a toner. At page 7, lines 1-5, Applicants describe the effect of an isolation ratio larger than 10 % by number. That is, the variation in the electricity of the toner becomes large when the image formation using such a toner is repeated for a long period of time, causing many problems.

Clearly, the prior art references do not teach or suggest, explicitly or implicitly, a toner having 10% or less of an isolation ratio of an element selected from copper, chromium, iron, zinc and molybdenum, as recited in claim 1.

Accordingly, Applicants respectfully submit that claim 1 is not rendered obvious by the cited references because they fail to teach or suggest all the limitations as recited therein.

For at least the same reasons applied to independent claim 1, claims 2-6 and 8, which depend from claim 1, are not rendered obvious by the cited references.

Accordingly, reconsideration and withdrawal of the obvious rejection of claims 1-6, 8-10 and 11/6 is respectfully requested.

Claims 7 and 11/7 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over by Ugai, or Sato combined with Hagiwara (U.S. Patent Number 5, 037,715).

Claim 7 variably depends from what is now believed to be an allowable claim 1.

Therefore, claim 7 is allowable for at leas the reasons stated herein relative to claim 1.

Claim 11/7 recites an imaging forming method involving the toner of claim 7. As mentioned, claim 7 is allowable as variably depending from what is now believed to be an allowable claim 1. Thus, claim 11 is allowable.

Notwithstanding the foregoing, Applicants submit the following comments regarding the Hagiwara reference.

Hagiwara discloses resins for toner of electrophotography and manufacturing thereof. Hagiwara does not teach or suggest a toner containing an element selected from copper, chromium, iron, zinc and molybdenum and having an isolation number of the element of not more than 2.5 % by number.

Accordingly, claim 7 is not rendered obvious by the references, individually or in any combination. Similarly, claim 11/7 is patentable over the references.

For at least the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 7 and 11/7 under 35 U.S.C. § 103(a).

Conclusion

As discussed above, claims 1-11 are not anticipated nor rendered obvious by the prior art references relied upon by the Examiner, individually or in any combination.

Also, by amendments to the claims and specification, the rejection under 35 U.S.C. § 112, second paragraph, and objection to the specification have been completely addressed.

It is believed that the amendments and remarks fully comply with the Office Action, and

the claims, as amended herein, are allowable to Applicants. Thus, Applicants respectfully request that the rejection of claims 1-11 be reconsidered and withdrawn and the application be allowed and passed to issue.

The Examiner is invited to contact Applicants' attorneys at the below-listed phone number regarding this response with amendment and remarks or otherwise concerning this application.

Please find enclosed with this response, the necessary petition for extension of time and the required fee. If there are any additional charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicants' attorneys.

Respectfully submitted,

TOMOMI OSHIBA ET AL.

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ATTACHMENT 1A

SUP

Table 1

				Exan	nple	
			1	2	3	4
	Binder	Styrene-acrylate resin 1	100	109	100	100
	resin	Styrene-acrylate resin 2				
		Polyester resin				
		Magnetite	1 05	105	105	105
		Copper phthalocyanine				
		type cyan pigment				
	Colorant	Quinacridoné magenta type				
		pigment /				
Receipt of		Benzidine yellow				
raw material		type pigment				
composition		Carbon black				_
of colored		Low molecular			٩	
particle		weight	3.5	3.5	4	3.5
(Parts by	Mold /	polypropylene				
weight)	releasing	Low molecular weight				
	agent	polyethylere				
		Fatty acid amide				
		wax				
		Iron-azo complex	1	1	1	0.7
		Chromium				
/	Charge	salicylic acid				
	controll-	complex Zinc salicylic				
	ing	acid complex				
	agent	Molybdenum				
		quatenary				
		ammonium complex				
	1	Silica	1	1	1	1
External add:		Positively				
(Added amount		chargeable				
particle in p	parts by	silica				
weight)		Titanium oxide				

AZ

				Example					
			5	6	7	8			
		Styrene-acrylate	-						
		resin 1							
	Binder	Styrene-acrylate							
	resin	resin 2	,						
		Polyester resin	190	100	100	100			
		Magnetite							
		Copper /							
		phthalocyanine/	3	3	3	3			
		type cyan pigment							
	G-7	Quinacridone							
	Colorant	magenta type							
		pigment /							
5		Benzidine yellow							
Receipt of		type pigment							
raw material		Carbon black							
composition		Low molecular							
of colored		wgight /			2	2			
particle		polypropylene							
(Parts by	Mold	Low molecular							
weight)	releasing	weight	3	3					
	agent	polyethylene /							
		Fatty acid amide							
		wax \			2	2			
		Iron-azo complex		·					
		Chromium							
	Champa	salicylic acid	2.5						
	Charge controll-	complex							
	ing	Zinc salicylic							
	agent	acid complex							
	agenc	Molybdenum							
		quatenary							
		ammonium complex							
7		Silica	2.5	2.5	2.5	2.5			
External addi (Added amount		Positively							
particle in p		cnargeable							
weight)	cares by	silica							
/ 3== - /		Titanium oxide	0.5	0.5	0.5	0.5			

Conta

		-		E>	camp.	le	
			9	10	$\sqrt{11}$	12	13
		Styrene-acrylate		1			
		resin 1		\angle			
•	Binder	Styrene-acrylate	100				
	resin	resin 2					
		Polyester resin		100	100	100	100
l		Magnetite /					
		Copper /					
l		phthalocyanine	3				
		type cyan pigment					
	Colomb	Quinacridone					
	Colorant	magenta zype		4		4	
		pigment/					
D		Benzidine yellow			4		4
Receipt of		type/pigment			4		4
raw material		Carbon black					
composition		Low molecular					
of colored		weight	4	4	4	4	4
particle	N-1-3 /	polypropyleme					
(Parts by	Mold	Low molecular					
weight)	releasing	weight /					
	agent	polyethylene					
		Fatty acid amyide	l				
		wax /	5				
		Iron-azo complex					
	/	Chromium					
	/ g1	salicylic acid				2	2
/	Charge	complex					
/	controll-	Zinc salicylic		_			
/	ing	acid complex		2	2		
	agent	Molybdenum					
/		quatenary					
/		ammonium complex					
n		Silica	2.5	2.5	2.5	2.5	2.5
External add:		Positively					
(Added amount		chargeable					
particle in p	parts by	silica					
weight)		Titanium oxide	0.5	0.5	0.5	0.5	0.5
		1.			·	L	1

A2 contá

					para
	I Æ≥	camp:	le	l '	ive
		<u>-</u>	-	1	mple
	14	15	16	1	2
Styrene-acrylare					
resin 1	100	100	100		100
Binder Styrene-acrylate	1				
resin resin 2					
Polyester/resin				100	
Magnetite	-			105	
Copper					
phthalocyanine	}				
Ouinacridone	·				
Colorant magenta type					
pigment					
	 				
Peceint of / / /					
Taw material / Carbon black	10	10	10		10
COMPOSITION	10	10	1		10
or corored / weight/	1	,	_/		4
particle / / / /	–	-	•		-4
rates by Moriu Tow mologular	1				
weight) releasing weight				4	
l agent :				-	
		2 5	-	1	1
Chromium	-	2.5			
/ Charge -	4			İ	
controll-	1		-	<u> </u>	
1 1 3 11 0 1 -					
agent acid complex	1				
Molybaenum	etite er alocyanine cyan pigment acridone nta type ent addine yellow pigment on black 10 10 10 nolecular et 4 4 4 propylene nolecular ethylene racid amide ex salicylic acid 2 ex salicylic complex odenum enary enary enium complex ca 2.5 2.5 cively geable silica				
quatenary			2		
ammonium complex	-		-		
External additive Silica	2.5	2.5		1	2.5
(Added amount to Positively			1		
coldred particle in chargeable silica					_
parts by weight) Titanium oxide	0.5	0.5	<u></u>	<u> </u>	0.5

A2 contid

ATTACHMENT 1B

Table 1

		<u> </u>				
				Exam		
			1	2	3	4
		Styrene-acrylate	1.00	100	100	100
	\	rocin 1	 		 	1
	Binder	Styrene-acrylate				
	resin	resin 2	+	+		
		Polyester resin	105	105	105	105
		Magnetite	+===	1		
		Copper				
		l-b-balocvanine	-			
		type cyan pigment				
	Colorant	louinacridone				
	Colorant	Imagenta Cypo				
		(5) (m) (1) (
		Benzidine yellow			\	
Receipt of		type pigment			1	
raw material	L	Carbon black				
composition		Low molecular	3.	5 3.	5 4	3.5
of colored	Mold	weight	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \			
particle	releasi	polypropylene				1
(Parts by	agent	TOM MOTOGOT		-		
weight)	1 - 2 - 2 - 2	lweight			\	
	releasi	nolvethylene				
	agent	Fatty acid amid	۳			
				1	1	1. 0.
		Iron-azo comple	×			
	Charg	e Chromium			1	
	contro	ll-salicylic acid				
	ing	complex				
	agen	t Zinc salicylic	1			
	Charg	ge acid complex				
	contro	Molybdenum	1		1	
	ing	miatenary .		1		. \
	ager	ammonium compl	.ex		1	1
		Silica			 +	
External	additive	Positively	. \			
me Boateri	ount to	chargeable S1.	lica			
laniored p	article 1	Titanium oxid	e			
parts by	weight)	1 + + 0				

Receipt of raw material composition of colored particle (Parts by weight) Magnetite Copper phthalocyanine 3 3 3 3 type cyan pigment Quinacridone magenta type pigment Benzidine yellow type pigment Carbon black Low molecular veight 2 2 polypropylene agent Low molecular (Mold weight 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	3
Receipt of raw material composition of colored particle (Parts by weight) Red Receipt of resin 2 Receipt of raw material composition of Fatty acid amide (Parts by weight) Receipt of resin 2 Polyester resin 100 100 100 Magnetite Copper phthalocyanine 3 3 3 3 type cyan pigment 2 type cyan pigment 2 type pigment 3 2 2 type pigment 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3
Receipt of raw material composition of colored particle (Parts by weight) Red Receipt of resin 2 Receipt of raw material composition of Fatty acid amide (Parts by weight) Receipt of resin 2 Polyester resin 100 100 100 Magnetite Copper phthalocyanine 3 3 3 3 type cyan pigment 2 type cyan pigment 2 type pigment 3 2 2 type pigment 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3
resin 2 Polyester resin 100 100 100 Magnetite Copper phthalocyanine 3 3 3 type cyan pigment Colorant Colorant Colorant Colorant Benzidine yellow type pigment Carbon black Ca	3
Receipt of raw material composition of colored particle (Parts by weight) Magnetite Copper phthalocyanine 3 3 3 3 3 4 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	3
Receipt of raw material composition of colored particle (Parts by weight) Magnetite Copper phthalocyanine 3 3 3 3 type cyan pigment Quinacridone magenta type pigment Benzidine yellow type pigment Carbon black Low molecular weight 2 2 polypropylene agent Low molecular (Mold weight 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	3
Receipt of raw material composition of colored particle (Parts by weight) Mold releasing polyethylene agent] Copper phthalocyanine 3 3 3 3 type cyan pigment Quinacridone magenta type pigment Benzidine yellow type pigment Carbon black Low molecular weight 2 2 polypropylene 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	
Receipt of raw material composition of colored particle (Parts by weight) Meceipt of raw material composition of colored particle (Parts by weight) Mold weight polypropylene agent Low molecular weight releasing polypropylene agent Fatty acid amide 2 Phthalocyanine to type cyan pigment Quinacridone magenta type pigment Benzidine yellow type pigment Carbon black Low molecular veight 2 Mold veight 3 3 3 3 4 7 7 8 8 9 10 10 10 10 10 10 10 10 10	
Receipt of raw material composition of colored particle (Parts by weight) Weight) Receipt of raw material composition of colored particle (Parts by weight) Weight Phthalocyantille type cyan pigment Quinacridone magenta type pigment Carbon/black Low molecular weight releasing polypropylene agent Low molecular [Mold weight agent Low molecular [Mold weight Fatty acid amide 2	
Receipt of raw material composition of colored particle (Parts by weight) Weight) Colorant Quinacridoné magenta type pigment Benzidine yellow type pigment Carbon/black Low molecular weight 2 Mold weight releasing polypropylene agent Low molecular (Mold weight 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	2
Receipt of raw material composition of colored particle (Parts by weight) Mold weight Amold weight	2
Receipt of raw material composition of colored particle (Parts by weight) Mold weight Amold weight	2
Receipt of raw material composition of colored particle (Parts by weight) Mold weight Amold weight	2
Receipt of raw material composition of colored particle (Parts by weight) Mold weight 2 Mold releasing polypropylene agent Low molecular (Mold weight 2) Mold weight 3 3 3 releasing polyethylene agent Fatty acid amide 2	7 8
raw material composition of colored particle (Parts by weight) Mold weight 2 releasing polypropylene agent Low molecular (Mold weight 2) Mold weight 3 3 3 releasing polyethylene agent) Fatty acid amide 2	2
composition of colored particle (Parts by weight) Weight) Low molecular 2 Mold weight 2 releasing polypropylene 3 [Mold weight 3 3 releasing polyethylene agent] Fatty acid amide 2	2
of colored particle (Parts by weight) Mold weight 2 releasing polypropylene agent Low molecular (Mold weight 3 3 releasing polyethylene agent) Fatty acid amide 2	2
particle (Parts by weight) Mold weight releasing polypropylene agent Low molecular (Mold weight 3 3 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
(Parts by weight) agent Low molecular [Mold weight 3 3 3 releasing polyethylene agent] Fatty acid amide 2	
weight) agent Low molecular Mold weight releasing polyethylene agent) Fatty acid amide 2	
releasing polyethylene agent]/Fatty acid amide 2	
agent]/Fatty acid amide 2	
/10.73.7	2
	Binder resin 1 Styrene-acrylate resin 2 Polyester resin 100 100 100 100 Magnetite Copper phthalocyanine type cyan pigment Colorant Colorant Magenta type pigment Benzidine yellow type pigment Benzidine yellow type pigment Carbon/black Icow molecular weight 2 2 Mold releasing polypropylene agent [Mold weight 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
30110111	
agent	
Zinc Salicylle [2.5]	
deld complex	
Molybdendii	
/ quatenary	
/ Jammorium Complex 2.5 2.5 2.5	2.5
External additive Silica	+
(Added amount to Positively	
colored particle in chargeable silica	+
parts by weight) Titanium oxide 0.3 0.3 0.5	10.5

And C

			T /	Ex	ampl	_e	
			1/9		11	12	13
		7 - 1 - 2	1/3				
		Styrene-acrylate	1	1 1			
		racin 1		 			-
	Binder	Styrene-acrylate	100	1			
	resin	lrasin 2		100	100	100	100
	100111	Polyester resin		+=00	-	1	
		Magnetite /				1	100 4 4 2J [2] 2 2 2.5 2.
		copper	12				1.
		l-h-halocvanine	. 12	1	1		
		type cyan pigmen			1	1	
	Colorant	louinacrádone		1 4		4	
	Tcolorant	Imagenta Cype		1 -			
	C010101				+		1
		Benzidine Yellov	y		4		-
Receipt of		type pigment			1		
raw material		Carbon black				_	
composition		Styrene-acrylate resin 1 Styrene-acrylate resin 2 Polyester resin Magnetite Copper phthalocyanine type cyan pigment Orant Quinacridone magenta type pigment Benzidine yellow type pigment Caybon black Low molecular weight easing polypropylene gent Low molecular weight easing polyethylene sigent) Fatty acid amide genty Charge htroll- salicylic acid ing agent Zinc salicylic acid complex arent Zinc salicylic acid complex htroll- ing agent Molybdenum quatenary ammonium complex ive Silica Positively le in chargeable silica to positively le in chargeable silica to positively le in chargeable silica O 100 100 100 A 4 4 4 A 4 4 A 5 6 A 6 7 A 7 7 A 7 8 A 8 7 A 8 8 A 9 8 A 9 8 A 9 8 A 9 8 A 9 8 A 9 8 A 9 9 A	1 4	4			
of colored	Mold	by bight	/9 10 11 12 13 rlate				
particle	MOIG	polypropylene					
(Parts by	releasi	Low molecular					
weight)	7-7-7-8	/weight				1	
	releasi	Implyethylene					
	agent	Fatty acid amid	ie	5			
	\ again	wax		=-			2] [2
		Iron-azo compl	ex				
	Chafg	e Chromium	1	10	27 /	(27)	2 2
		ll-salicylic acid	·. \	10	ا رحے	. اد	- -
·		complex					
		Zinc salicylic	: \	1.	2 1	2	\
	[Charg	ge acid complex					
		Molybdenum	i		1	1	<u>}</u>
		miatenary			1	. \	\
	/ agen	ammonium comp	rex_	12 E	2 5	2.5	2.5 2
		Silica		4.3	4.5		
External a	additive	Pagitively					
ame Sales	ount to	chargeable Si	lica	 	0 5	0 5	0.5
colored p	article 1	Titanium oxid	le	10.5	0.5	10.5	1
l hv	welduri						



	31
	Example Comparative example
	14 15 16 1 2 100
	Styrene-acrylate 100 100 100 100 100 styrene-acrylate 100 100 100
Binder resin	resin 2 Polyester resin 105
	Magnetite Copper phthalocyanine phthalocyanine
Colora	phthalocythic type cyan pigment type cyan pigment Quinacridone magenta type pigment
	Benzidine yellow 10 10 10 10 10 10 10 1
Receipt of raw material composition	/Carbon Black Low molecular 4 4 4 4
of colored Mol particle release age	sing polypropylene Low molecular
weight) [Mol	7d Weight asing polyethylene ent7 Fatty acid amide
Cha	Iron-azo complex 2.3
cont	ing complex gent ging salicylic
Ch con	harge acid complex acroll Molybdenum 2
External additiv	we Silica 1
(Added amount	e in chargeable oxide 0.5 0.5
parts by weight	

ATTACHMENT 2

【表1】

(A)

		_		,					₩ [#	捏	(S)							式	較例
			-	2	3	4	5	9	-	8	6	10	1.1	12	13	14	15	16	_	2
提 李	オルシー	スチレンーアクリル系書館1	8	8	8	81										100	8	8		50
	スチレンーアクリル	アクリル系機能2									100									
珊	ポリエステル樹	テル樹脂					<u>8</u>	8	8	8		8	901	100	8				100	
	マゲネタイト	1.h	105	105	105	<u> 2</u> 01													F.	
押	調うクロンアニン系ン	二条汀湖					ကိ	က္က	တ္တ	80	Š								3	
虧	キナクリドン系マゼンタ	系元七少爾			-						1.	4		4						
	ヘンジン系イエロ	条イエロー解析											4		7					
	カーボンブラッ	プラック											1			ot C	2	2		٤
	低分をポリプロ	ジプロピレン	3.5	ಚಿ	4	3.5		1.	2	2	4	4	4	4	P	27	2 -	2 5		Ĭ `
	低分子量ポリエチ	ジュチレン					8	8	1					1	•	۲	" .	7	-	₹
	脳機アミド系ワ	ド条ワックス		-					2	2	r.								7	
	アン系統制体	都体	-	-	-	0.7		1									2 2		-	-
	サリチル酸ダロム	政治中心結体					2.5	1	1			T	1	6	6	Š			-	-
	十リチル極重鉛塩	通動塩						1				2	6		- 1	Ş.				
	4数アンモニウムモリブ	うムモリブデン機能						T			T							c		
	外部統加利 多数数子 100	シリカ	-	-	-	-	2.5	2.5	2.5	2.5	2.5	2.5	2.5	25	2.5	2.5	9.5	,	 -	9.6
	- 1	正都性シリカ		<u> </u>				_	+	 	1	1						†-	1	ĺ
		酸化チタン					0.5	5.5	2	2	it	4	1	L	Į,	;		1	1	

[0057]

〈実施例17〉

Compara- tive	1 2	100		100	105					10	4			H,				2.5		
نز ق	16	100		1(1(+			0		4		-				1		
!	2	100					+			0 10	4			ιν.			7	5.	r-1	
	14 1	100 10				-	+			0 1(4		·	2			_	5 2		
,	13 1	10		00				-		-1-	4				7			5 2.		
	12 1	•		00 10			+		4		4				7			5 2.		
	11 1			00 10			+	4			4				2			5 2.		
	0						1		4		4					2		5 2.		
le I	9 1		0	100				4			4	-				2		5 2.	-	
Example	8		100	0.		м	+				4		ın			<u> </u>		5 2.		
	7			00 100		e e					7		2					5	<u>'</u>	_
	9			00		<u>m</u>	4				7		2					5 2		_
	5			00		. m	1								r.			5 2		
	4	100		Ä	105	м	-				rū.	т		7.	2			2	-	
:	3	100			105 1		1				м			0						
	2	00			90						74.			-				7	_	
	H	1001		:	105 1						3.5			1 1				1 1		
		Styreneacrylate 1	Styreneacrylate resin 2	Polyester resin	Magnetite 1	Copper phthalocyanine type	cyan pigment	Quinacridone magenta type pigment	Benzidine yellow type pigment	Carbon black	Low molecular weight polypropylene	Low molecular weight polyethylene	Fatty acid amide wax	Iron-azo complex	Chromium salicylic	Zinc salicylic acid	Molybdenum quatenary	Silica	Positively	chargeable allica
	,	Binder	resin				Colorant					Mold	agent		Charge	ing agent		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ored (Audeu	
			Receipt of	raw material	composition of colored	particle	(Parts by	weight)										1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	External additive (Added amount to colored	

Table

ATTACHMENT 3

Part of

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

A marked up version of Table 1 appears as ATTACHMENT 1B.

8

A marked up version of the paragraph replaced on the eleventh page of the specification follows:

"The number of the particle containing the specified element which synchronously emits light caused by the specified element with light caused by carbon atom, hereinafter referred to as a synchronous light emission particle, and the number of the particle containing the specified element which emits light caused by the specified element without synchronous with light emission caused by carbon atom, hereinafter referred to as a non-synchronous light emission particle, are counted. The ratio of the number of the synchronous light emission particle to the sum of the number of the synchronous and non-synchronous light emission particles is defined as the [isoration] isolation ratio of the specified element in percent by number."

A marked up version of the paragraph replaced on the eleventh page of the specification follows:

"In Toner A, the isolation ratio of the specified element can be controlled by changing conditions of the crushing or the classification. The isolation of the specified element can be inhibited when the crushing is performed under a mild condition so as to inhibit crushing at the interface between the substance containing the specified element and the resin. Particularly, a mechanical crushing method is preferable since crushing at the interface is difficultly occurred and the formation of the isolated matter can be inhibited by such the method compared with an air-current crushing method. Examples of the mechanical crushing apparatus include

[Turbomill] <u>TURBOMILL</u>, manufactured by Turbo Kogyo Co., Ltd., and [Cryptron] <u>CRYPTRON</u> manufactured by Kawasaki Juko Co., Ltd. In the classifying process, a suitable isolation ratio can be obtained by repeating the classification while feedbacking the result of monitoring on the final isolation ratio."

A marked up version of Table 1 at pages 28-31 of the specification is attached hereto.

IN THE CLAIMS

A marked up version of claims 1, 4, 5 and 7 follows:

- 1. (Amended/Marked up) A toner for developing an electrostatic image comprising a resin binder and a colorant, wherein the toner contains an amount of not less than 0.1% by weight of an element selected from the group consisting of copper, chromium, iron, zinc and molybdenum [elements of the Groups of 1B, 2B, 4B, 5B, 6B, 7B, 8, 3A and 4A of the fourth and fifth periodic of the long periodic table of the elements], and the isolation ratio of the element is not more than 10% by number.
- 4. (Amended/Marked up) The toner of claim 1, wherein the element is copper, iron, [and] or zinc.
- 5. (Amended/Marked up) The toner of claim 1, wherein the element is [copper, chromium, iron, zinc or] molybdenum.

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- 6. (Amended/Marked up) The toner of claim [5] 1, wherein the isolation ratio of the element is not more than 2.5% by weight.
- 7. (Amended/Marked up) The toner of claim 6, wherein Mn of [resin of] the binder resin is 1,000 to 100,000, Mw of the resin is [2,00] 2,000 to 1,000,000, and a molecular weight distribution Mw/Mn is 1.5 to 100.